valley projects have also set up local seismic networks for specifc research and application requirements.

(c) and (d) Yes Sir. On th$_e$ basis of data of the past earthquakes and geological factors, the Bureau of India Standards has published a seismic zoning map (IS; 1893-1984) dividing the country into five zones. Zone V is the most vulnerable to earthquakes while zone I is the least prone. Zone V covers areas in Jammu & Kashmir, Himachal Pradesh, U.P. Hills, Rann of Kutch, North Bihar, entire NE Region and Andaman & Nicobar Islands. Zone IV largely covers the states of Jammu and Kashmir, Punjab, Haryana, Himachal Pradesh, State of the Capital Region of Delhi, North U.P., Bihar, West Bengal, Sikkim, Parts o Rajasthan, Gujarat and Maharashtra. Rest of the country falls under seismic zones III, II and I which are comparatevely less seismic. As per practice, the seismic zoning map i$_s$ periodically updated. The seismic observatories are upgraded on continuing basis.

A specific project has been evolved for upgradation and expansion of seismic observatories for which World Bank has, indicated its support.

(e) and (f) The earthquake data collected by the seimological observatories is used for scientific studies. Research is continuing to understand the mechansm. of earthquakes, However, presently there is no technology available anywhere in the world to predict earthquakes in time, space and magnitude with reasonable degree of accuracy.

Use of grarlie in pest control

2445. SHRI KRISHAN LAL SHARMA: Will the PRIME MINISTER be pleassd to state; ,

(a) whether it is a fact that according to a study conducted by Council of Satentific and Industrial Research, garlic, used *as* preservative and for flavouring, can also be used in pest control management;

(b) whether it is also a fact that the use of garlic in pest control is likely :o reduce the use of hazardous chemicals used in spraying on crops; and

(c) if so, whether Government have drawn any plan to popularise the use of garlic in pest control and reduce dependence on imported chemicals used in spraying; and if so, the details thereoi"?

THE MINISTER OF STATE IN THE PRIME MINISTER'S OFFICE AND MINISTER OF STATE IN THE DEPARTMENTS: OF ATOMIC ENERGY, SPACE AND MINISTRY OF SCIENCE AND TECHNOLOGY (SHRI BHUVNESH CHATURVEDI). (a) and (b) No uuch study has been conducted by CSIR. However, anti-bacterial effect of Garlic reported by BARC, Bombay Loyola College Madras, Central Rice Research, Institute, Cuttack and Tamil Nadu Agricultural University, Madurai indicate that Garlic can be used for control of house lies, mosquitoes, insect pests of cotton and stored gra-ins. Violatile fraction of Garlic oil, both natural and synthetic, have proved to be effectice in controlling paddy moth, pulses beetle, khapra beetle (for stored wheat grain) and rice moth.

(n) Techno.economic feasibility of such plans need to be gone into thoroughly before embarking upon the proposed substitution.

Bio_village development Project

2446. SHRI RAHASBIHARI BARIK; Will the PRIME MINISTER be pleased to state:

(a) whether Government are implementing "Bio-Village Develops ment Projects";

(b) if so, the States or Union Territories where these projects are being implemented;